1,032-101 A/FWC
08/816207

Attorney's Docket No. 66331.P002C

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents
Washington, D.C. 20231
BOX FWC

Prior Application:
Examiner: Shin, C.
Art Unit: 2317

RULE 62

Sir: This is a request for filing a **file wrapper**

XXX Continuation application _____ Divisional application

under 37 C.F.R. § 1.62 of pending prior nonprovisional application no. 08/343,762,

filed on November 21, 1994,

of Andrew Laursen, et al.,
(inventor(s) currently of record for prior application)

for Method and Apparatus for Scalable, High Bandwidth Storage Retrieval and Transportation of Multimedia Data on a Network.
(title)

X 1. **The above-identified prior application is hereby expressly abandoned under 37 C.F.R. § 1.62(g) as of the filing date of this new application. Please use all the contents of the prior application file wrapper, including the drawings, as the basic papers for the new application. No such copy of the prior application is included herewith. The present application is being filed under 37 C.F.R. § 1.62 before the payment of the issue fee, abandonment of, or termination of the proceedings on the prior application, or after payment of the issue fee (the latter if a petition under 37 C.F.R. § 1.313(b)(5) has been filed and granted in the prior application).**

XX 2. Please enter the preliminary amendment enclosed before calculating the filing fee.

_____ 3. Before calculating the filing fee, please enter in the present application the amendment filed on _____ under 37 C.F.R. § 1.116, but unentered, in the parent application.

"Express Mail" mailing label number EM564116455US

Date of Deposit March 12, 1997

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Cheri Clark
(Typed or printed name of person mailing paper or fee)

Cheri Clark
(Signature of person mailing paper or fee)

LJV/cak (10/25/96) Rule 62

_____ 4. Cancel in this application claims _____ of the prior application before calculating the filing fee (wherein at least one independent claim is retained for filing purposes).

__X__ 5. The filing fee is calculated below:

CLAIMS NOW PENDING IN THE PRIOR APPLICATION PLUS/MINUS CLAIMS ADDED/CANCELED ABOVE

	(Col. 1)		(Col. 2)	SMALL ENTITY		OTHER THAN A SMALL ENTITY	
For:	No. Filed		No. Extra	Rate	Fee	Rate	Fee
Basic Fee:					$ 385		$ 770
Total Claims:	21	- 20	* 1	x 11	$	x 22	$ 22
Indep. Claims:	6	- 3	* 3	x 40	$	x 80	$ 240
☐ **Multiple Dependent Claim(s) Presented**				**+130**	**$**	**+260**	**$**
				TOTAL	$	TOTAL	$1032

* If the difference is less than zero, enter "0" in Col. 2.

_____ 6. A verified statement to establish small entity status under 37 C.F.R. §§ 1.9 and 1.27 _____ is enclosed/_____ was filed in the pending prior application **and such status is still proper and desired.** 37 C.F.R. § 1.28(a).

__XX__ 7. The Commissioner of Patents and Trademarks is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account No. 02-2666. A duplicate of this sheet is enclosed for Deposit Account purposes.

__XX__ 8. A check in the amount of $__1032.00__ is enclosed for the filing fee.

_____ 9. A check in the amount of $_____ is enclosed for the petition fee pursuant to 37 C.F.R. § 1.17.

__XX__ 10. Amend the specification by inserting the following before the first sentence on the first page:

__XX__ (a) – This is a __X__ continuation/_____ divisional of application no. __08/343,762__, filed __11/21/94__, now abandoned. --

_____ (b) –, which is a _____ continuation/_____ divisional of application no._____, filed _____

_____

_____. -- (Status: abandoned, pending, etc.)

(list all prior applications)

__XX__ 11. It is hereby requested that any request for a convention priority made in the prior application be transferred to this Rule 62 application.

_____ 12. Priority of foreign application number _____ filed on _____ in (country) _____ is claimed under 35 U.S.C. § 119.

__XX__ 13. The prior application is assigned of record to:
Oracle Corporation
500 Oracle Parkway, Redwood Shores, CA, 94065.

__XX__ 14. The Power of Attorney in the prior application is to:

____,
(Name) (Reg. No.)

Edwin H Taylor, Reg. No. 25,129, and certain other listed attorneys or agent(s) of:
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 Wilshire Blvd., Seventh Floor
Los Angeles, California 90025
(310) 207-3800

__XX__ (a) The Power appears in the original papers of the prior application no. 08/343,762 filed 11/21/94.

______ (b) The Power does not appear in the original papers, but was filed on ____________ in prior application no. ____________ filed ____________.

______ (c) A new Power has been executed and is attached.

______ (d) Recognize as an associate attorney or agent and address all future communications to:

____,
(Name) (Reg. No.)

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 Wilshire Blvd., Seventh Floor
Los Angeles, California 90025
(408) 720-8598

__XX__ (e) Address all future communications to the undersigned.

______ 15. **Enclosed is a photocopy of a petition for an extension of time pursuant to 37 C.F.R. § 1.136 concurrently (or previously) submitted under separate cover for the above-referenced prior application.**

__XX__ 16. Applicant(s) hereby petition(s) for an extension of time pursuant to 37 C.F.R. § 1.136, if needed, for the above-noted prior application. The Commissioner of Patents and Trademarks is hereby authorized to charge any extension or petition fee under 37 C.F.R. § 1.17 that may be required for the above-referenced prior application to Deposit Account No. 02-2666. Two photocopies of this document are enclosed for filing in the prior application file and for Deposit Account purposes.

__XX__ 17. The filing of an application under 37 C.F.R § 1.62 will be construed to include a waiver of secrecy under 35 U.S.C. § 122 to the extent that any member of the public who is entitled under the provisions of 37 C.F.R. § 1.14 to access to or information concerning either the prior application or any continuing application filed under the provisions of 37 C.F.R. § 1.62 may be given similar access to, or similar information concerning, the other application(s) in the file wrapper.
37 C.F.R. § 1.62(f).

_______ 18. This application is being filed by fewer than all the inventors named in the prior application. In accordance with 37 C.F.R. § 1.62(a), the Commissioner of Patents and Trademarks is requested to delete the name(s) of the following person(s) who are not inventors of invention being claimed in this application:

____

____.

Respectfully submitted,

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

Date: 3/12/97

By ______________________
James H. Salter

Reg. No. 35,668

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
(408) 720-8598

_XX_ Attorney or Agent of Record

_______ Associate Attorney or Agent

_______ Filed Under 37 C.F.R. § 1.34(a)

08816207 . 031297

08/816207

Attorney Docket No.: 066331.P002C *Patent*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Andrew Laursen, et al.

Serial No. Not Yet Assigned

Filing Date: Not Yet Assigned

For: METHOD AND APPARATUS FOR SCALABLE, HIGH BANDWIDTH STORAGE RETRIEVAL AND TRANSPORTATION OF MULTIMEDIA DATA ON A NETWORK

Rule 1.62 Continuation of:

Serial No. 08/343,762

Filing Date: November 21, 1994

Examiner: Shin, C.
Art Unit: 2317

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

on 3/12/97
Date of Deposit

Cheri Clark
Name of Person Mailing Correspondence

Clark 3/12/97
Signature Date

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

Dear Sir:

In connection with a Rule 1.62 continuation application and in response to the Office Action mailed in the parent case on December 12, 1996, please enter the following amendments and consider the following remarks.

IN THE CLAIMS

Please amend the claims as follows and add the new claims as indicated.

5. (Amended) A high bandwidth, scalable server for storing, retrieving, and transporting multimedia data to a client in a networked system, said server comprising:

an upstream manager receiving messages from said client and routing said messages to an appropriate service on said server, said upstream manager being coupled to a first network;

a downstream manager sending a stream of said multimedia data from said appropriate service on said server to said client, said downstream manager being coupled to a second network; and

a connection service for maintaining information to connect said client, said upstream manager, said downstream manager, and said appropriate service on said server.

6. (Amended) The server in Claim 5 wherein said connection service further creates a virtual [circuit] connection between an upstream address and a downstream address for said client.

7. (Amended) The server in Claim 6 wherein said connection service also manages said virtual [circuit] connection.

8. (Amended) A computer-implemented method for retrieving and transporting multimedia data between a client and a server on a network, said computer-implemented method comprising the steps of :

[issuing] receiving a client request for initialization in a message to an upstream manager in said server, said upstream manager being coupled to a first network;

obtaining an upstream physical address for said client as said client request enters said server;

allocating a downstream physical address and downstream logical address to said client corresponding to the upstream physical address obtained for said client, said downstream physical address being used by a downstream manager for sending a stream of said multimedia data from a service on said server to said client, said downstream manager being coupled to a second network; and

updating a connection service table with said upstream physical address, said downstream physical address, and said downstream logical address for said client.

9. (Amended) The computer-implemented method in Claim 8 wherein further comprising the steps of:

[issuing] receiving a service request message from said client to said server via said upstream manager, said service request corresponding to said service on said server, said service request message including said client downstream logical address and a service destination logical address;

generating a response message from said server to said client, said response message including said client downstream logical address; and

sending said response message to said client via said downstream manager.

10. (Amended) The computer-implemented method in Claim [9] 8 wherein said step of updating said connection service with said upstream and downstream addresses for said

client includes the step of creating a virtual [circuit] connection between said upstream and downstream addresses for said client.

11. (Amended) The computer-implemented method in Claim 10 wherein said step of creating said virtual [circuit] connection between said upstream and downstream addresses for said client further includes the step of managing said virtual [circuit] connection.

12. (Amended) The computer-implemented method in Claim 11 wherein said step of managing said virtual [circuit] connection includes the steps of:

creating a routing table containing said client downstream logical address and a corresponding client downstream physical address;

accessing said connection service table; and

utilizing information in said routing table and said connection service table to route said client service request message from said client to said service in said server and to route said response message from said service in said server to said client via said downstream manager.

13. (Unchanged) The computer-implemented method in Claim 8 wherein said request for initialization to said upstream manager is a Remote Procedure Call (RPC).

14. (Amended) A computer-implemented method for scalable, high bandwidth storage, retrieval and transportation of multimedia data on a network, said computer-implemented method comprising the steps of:

storing only one copy of said multimedia data in a data repository wherein said only one copy of said multimedia data is available for retrieval concurrently by multiple clients;

retrieving said only one copy of said multimedia data from said data repository in response to requests received over a first network from said multiple clients; and

transporting contents of said only one copy of said multimedia data from said data repository to said multiple clients via a second network, said only one copy of said multimedia data being accessed repeatedly to concurrently service said requests from said multiple clients.

15. (Amended) The computer-implemented method in Claim 14 wherein the step of retrieving said only one copy of said multimedia data from said data repository further comprises the steps of:

routing said requests from said multiple clients to a real-time scheduler;

analyzing said requests to determine a load on said second network and said data repository;

determining when said requests can be granted based on said load; and

scheduling access to said multimedia data based on said step of determining.

16. (Unchanged) The computer-implemented method in Claim 14 wherein said multimedia data includes Binary Large Objects (BLOBs).

17. (Amended) A high bandwidth, scalable server for storing, retrieving, and transporting multimedia data to a client in a networked system, said server comprising:

means for storing only one copy of said multimedia data in a data repository wherein said only one copy of said multimedia data is available for retrieval by multiple clients;

means for retrieving said only one copy of said multimedia data from said data repository in response to requests <u>received over a first network</u> from said multiple clients; and

means for transporting contents of said only one copy of said multimedia data from said data repository to said multiple clients <u>via a second network</u>, said only one copy of said multimedia data being accessed repeatedly to concurrently service said requests from said multiple clients.

18. (Amended) The server in Claim 17 wherein the means for retrieving said only one copy of said multimedia data from said data repository further comprises:

means for routing said requests from said multiple clients to a real-time scheduler;

means for analyzing said requests to determine a load on said <u>second</u> network and said data repository;

means for determining when said requests can be granted based on said load; and

means for scheduling access to said multimedia data based on said step of determining.

19. (New) A high bandwidth, scalable server for storing, retrieving, and transporting multimedia data to a client in a networked system, said server comprising:

means for receiving a client request for initialization in a message to an upstream manager in said server, said upstream manager being coupled to a first network;

means for obtaining an upstream physical address for said client as said client request enters said server;

means for allocating a downstream physical address and downstream logical address for said client corresponding to the upstream physical address obtained for said client, said downstream physical address being used by a downstream manager for sending a stream of said multimedia data from a service on said server to said client, said downstream manager being coupled to a second network; and

means for updating a connection service table with said upstream physical address, said downstream physical address, and said downstream logical address for said client.

20. (New) The server as claimed in Claim 19 further including:

means for receiving a service request message from said client via said upstream manager, said service request corresponding to said service on said server, said

service request message including said client downstream logical address and a service destination logical address;

means for generating a response message to said client, said response message including said client downstream logical address; and

means for sending said response message to said client via said downstream manager.

21. (New) The server as claimed in Claim 19 further including:

means for creating and managing a virtual connection between said upstream and downstream addresses for said client.

22. (New) The server as claimed in Claim 21 wherein said means for creating and managing said virtual connection further includes:

means for creating a routing table containing said client downstream logical address and a corresponding client downstream physical address;

means for accessing said connection service table; and

means for utilizing information in said routing table and said connection service table to route said client service request message from said client to said service in said server and to route said response message from said service in said server to said client via said downstream manager.

23. (New) The server as claimed in Claim 19 wherein said means for receiving a client request for initialization further includes a means for receiving a Remote Procedure Call (RPC).

24. (New) A high bandwidth, scalable server for storing, retrieving, and transporting multimedia data for multiple client in a networked system, said server comprising:

an upstream manager receiving messages from said multiple clients and routing said messages to an appropriate service on said server, said upstream manager being coupled to a first network;

a downstream manager sending a stream of said multimedia data from said appropriate service on said server to said multiple clients, said downstream manager being coupled to a second network;

a connection service for maintaining information to connect said multiple clients, said upstream manager, said downstream manager, and said appropriate service on said server;

means for storing only one copy of said multimedia data in a data repository wherein said only one copy of said multimedia data is available for retrieval by said multiple clients;

means for retrieving said only one copy of said multimedia data from said data repository in response to requests received over the first network from said multiple clients; and

means for transporting contents of said only one copy of said multimedia data from said data repository to said multiple clients via the second network, said only one copy of said multimedia data being accessed repeatedly to concurrently service said requests from said multiple clients.

25. (New) The server in Claim 24 wherein the means for retrieving said only one copy of said multimedia data from said data repository further includes:

means for routing said requests from said multiple clients to a real-time scheduler;

means for analyzing said requests to determine a load on said second network and said data repository;

means for determining when said requests can be granted based on said load; and

means for scheduling access to said multimedia data based on said step of determining.

REMARKS

Applicant respectfully requests consideration of the subject application as amended herein. This Preliminary Amendment is submitted in response to a final Office Action mailed in the parent case on Dec. 12, 1996. Claims 5-25 are pending in this application.

In the Dec. 12, 1996, Office Action, the Examiner withdrew from consideration Claims 14-18 as drawn to a non-elected invention. These claims are again presented herein as claims directed at different aspects of the same invention. All of the claims presented herein are drawn to a high bandwidth, scalable server and method for storing, retrieving, and transporting multimedia data to a client in a networked system. All pending claims are appropriate for examination in this application.

In the Dec. 12, 1996, Office Action, the Examiner rejected claims 5-11 & 13 under 35 U.S.C. §103 as being unpatentable over Weinreb et al., U.S. Patent No. 5,426,747 (Weinreb). Weinreb describes an apparatus and method for providing for virtual memory mapping and transaction management in an object oriented database system. The Weinreb system includes a client/server structure wherein a client makes a request for data to the server using a virtual address. If the requested data is not available at the requested virtual address, a cache memory is checked for the requested data. If the requested data is not in cache memory, the requested data is transferred from permanent storage to cache memory and the requested virtual address is mapped to the physical address of the requested data in cache memory. Weinreb therefore basically describes a virtual addressing system in a client/server network. This system, while including a notion of virtual and physical addresses, bears little resemblance to the presently claimed invention.

As presently claimed, the present invention is a high bandwidth, scalable server and method for storing, retrieving, and transporting multimedia data to a client in a networked system. The present invention teaches a means and method for virtualizing a client request, not because of the need to manage the storage of data in permanent or cache memory as in Weinreb, but to allow a virtual connection to be constructed between the client and a service

residing on the server. Further, the client request is virtualized to enable the upstream client request for service to occur on a first network while the corresponding downstream response occurs on a second network. These disclosed and claimed features of the present invention are far outside the scope of the Weinreb virtual addressing system. As specifically claimed, Claim 5 includes an upstream manager on a first network and a downstream manager on a second network with a connection service to connect the client to an appropriate service on the server. This structure is not taught or suggested in Weinreb. Further in Claim 14, the present invention includes a multimedia data repository accessible by multiple concurrent clients for requesting multimedia data via a first network and for receiving the requested multimedia data via a second network. Again, Weinreb does not teach or suggest this apparatus or method.

In conclusion, it is respectfully submitted that in view of the amendments and remarks set forth herein, that all objections and rejections have been overcome. All claims are now in condition for allowance and such action is earnestly solicited.

In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is invited to contact Jim H. Salter at (408) 720-8598. Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 3/12, 1997

James H. Salter
Registration No. 35,668

Wilshire Boulevard
Seventh Floor
Los Angeles, CA. 90025-1026
(408) 720-8598